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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,427	03/14/2005	Otto Skovholt	033246-0166	2508
22428 7590 08/21/2008 FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007				
EXAMINER CASTELLANO, STEPHEN J				
ART UNIT		PAPER NUMBER		
3781				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/517,427

Applicant(s)

SKOVHOLT ET AL.

Examiner

/Stephen J. Castellano/

Art Unit

3781

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2008.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
4a) Of the above claim(s) 6 and 15-18 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-5 and 7-14 is/are rejected.
7) ☒ Claim(s) 8-11 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 10 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 12-10-4, 3-14-5
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

Applicant's election of Group I (invention), claims 1 and Group B(species): Fig. 5 in the reply filed on July 23, 2008 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 6 and 15-18 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention and specie, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on July 23, 2008.

Claims 1-5 and 7-14 will be treated according to their merits.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the gluing or pressing together of metal plates to form a tight membrane as stated in claims 8 and 11 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Elected Fig. 5 shows the overlap and welding of adjacent steel plates.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claims 8 and 11 are objected to because the gluing or pressing described in claim 8 has not been shown in a drawing.

Claim 9 is objected to because of inconsistent claim terminology: For example, vertical wall (14) has several elements, a fluid barrier 26, an inner supporting wall element 24, an outer supporting wall element 25, an inner steel plate 28 and an outer steel plate 29. Claim 9 refers to "the vertical wall element" without specifying which element or elements in particular. Claim 9 refers to a horizontal metal plate and a horizontal base plate and labels both with reference numeral 27.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 recites the limitation "the vertical wall element" in line 4. There is insufficient antecedent basis for this limitation in the claim because it can't be determined which wall element is being referenced.

Claim 9 recites the limitation "the horizontal base plate" in the last line. There is insufficient antecedent basis for this limitation in the claim because it can't be determined if the base plate 12 or the horizontal metal plate 27 is meant.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, 7-11 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Bomhard.

Bomhard discloses a tank for storing cryogenic fluids as it is capable of storing low temperature liquids. Bomhard comprises a base plate (5), a vertical wall (4), the vertical wall includes a fluid tight barrier (metal liner 11), an inner structural supporting wall (15), an outer structural supporting wall (4).

Re claims 2 and 3, both the inner supporting wall and the outer supporting wall have T shaped reinforcement extending into the cast concrete on the inside adjacent layer thereof which provides multi-axial reinforcement of the concrete and multi-axially prestresses the concrete. In addition, the outer tank 2 has both vertical reinforcing provided by vertical rebar and horizontal reinforcing provided by horizontal rebar to multi-axially prestress the concrete of the outer wall 4.

Re claims 5 and 7, a barrier formed from a single cast or drawn sheet of steel or metal is structurally similar to a barrier formed from more than one sheet where the sheets are joined or welded with fluid tight joints.

Re claim 14, Bomhard discloses that metal liner can be replaced with a fluid tight barrier of synthetic resin paint (see col. 3, lines 6-8). There is no structural difference between resin or plastic paint and sheets of plastic materials welded together along their edges.

Claims 1, 5 and 7-11 are rejected under 35 U.S.C. 102(b) as being anticipated by GB 1341892 (the British reference).

The British reference discloses a tank for storing cryogenic fluids. The British reference comprises a base plate (22), a vertical wall (12), the vertical wall includes a fluid tight barrier (steel liner 36), an inner structural supporting wall (305), an outer structural supporting wall (46).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bomhard in view of Hendriks.

Bomhard teaches a metal barrier. Most metals have some degree of ductility. However, some metals are classified as brittle materials rather than ductile. Hendriks teaches an inner barrier 18, 19 made of Ni-steel or Al-alloy both ductile materials (see col. 2, lines 67 - col. 3, line 3). It would have been obvious to modify the metal barrier to be a ductile material to provide movement of the metal without tearing or rupture and a resulting perforation in the fluid barrier.

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bomhard in view of Papanicolaou et al. (Papanicolaou).

Bomhard discloses the invention except for the structural layers being wood. Papanicolaou teaches a tank for liquefied gases wherein a layer 32 of wood is used between an outer steel shell and an inner fluid barrier 33. It would have been obvious to provide wood in both the outer structural layer and the inner structural layer because of the excellent thermal insulation, lightness in weight and structural support that wood provides.

The rejection of claims 8-11 is insofar as these claims are understood. The British reference ('892) shows a floor liner 32 movable on a support because of curved footing 34 that allows expansion and contraction. Lange (3559835) teaches horizontal metal plate 16 which terminates several vertical wall elements and provides welding 19. Nelson (3538661) teaches horizontal metal plate 12 which terminates several vertical wall elements.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to /Stephen J. Castellano/ whose telephone number is 571-272-4535. The examiner can normally be reached on increased flexibility plan (IFP).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony D. Stashick can be reached on 571-272-4561. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Stephen J. Castellano/
Primary Examiner
Art Unit 3781

sjc